

1           **AUTOMATIC PROVISIONING OF SERVICES BASED ON A HIGH LEVEL**  
2           **DESCRIPTION AND AN INFRASTRUCTURE DESCRIPTION**

3                           **ABSTRACT**

4       The present invention is directed to provisioning and managing computing services in a  
5       computing utility system. It receives as an input an infrastructure independent description of a set  
6       of requirements on the new desired state of a computing service. It uses a knowledge plane to  
7       represent the infrastructure. The method generates a Concrete Model that describes a resource  
8       structure that refines the input and is implementable over the infrastructure. It then generates and  
9       possibly executes provisioning actions to create an identical resource structure on the  
10      infrastructure. The method can be used to create new computing services, to destroy existing  
11      computing services, to modify the resource combinations allocated to a computing service, or  
12      the configuration of these resources. Provisioning actions can be executed immediately, or saved  
13      and executed later, and possibly many times. Provisioning actions may be regenerated using the  
14      method whenever infrastructure characteristics, or the service requirements change.